

U.S. Department of Commerce
National Institute of Standards and Technology
Gaithersburg, MD 20899

Certificate Number: 89-071 Amended
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National Type Evaluation Program
Certificate of Conformance
for Weighing and Measuring Devices

For:

Load Cell
Column, Digital Output
Model Family: SCD and SCD-C*
n_{max}, Multiple Cells: 10,000
Capacity: 50,000 and 100,000 lb

Accuracy Class: III L

Submitted by:

Cardinal Scale Manufacturing Company
203 E. Daugherty
P.O. Box 151
Webb City, MO 64870
Tele: (417) 673-4631
Contact: Wm. Terry James

Standard Features and Options

The specific load cells in this family covered by this certificate are identified by the model number which includes the load cell capacity as a prefix to the SCD or SCD-C identification. The only difference between the SCD and the SCD-C load cells is that the SCD-C has a connector rather than the cable being attached directly to the load cell.

These load cells have a proprietary digital output signal and must be used with a Cardinal indicating element model 738SCD or equivalent.

<u>Model</u>	<u>Capacity</u>	<u>Minimum</u> <u>v_{min} (lb)</u>	<u>Dead Load (lb)</u>
50K-SCD	50,000	5	500
100K-SCD	100,000	10	1,000
50K-SCD-C	50,000	5	500
100K-SCD-C	100,000	10	1,000

Temperature Range: -10 to 40 °C (14 to 104 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Original signed by Chief, Office of Weights and Measures

Issue Date: March 7, 1991

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Cardinal Scale Manufacturing Company
Digital Output Column Load Cell
Model Family: SCD and SCD-C

Application: The load cells may be used in Class III L scales for multiple cell applications consistent with the model designations and parameters specified in this certificate.

Test Conditions: This certificate supersedes the Certificate of Conformance No. 89-071 and is issued to correct an error in model no. 50K-SCD-C to read 100K-SCD-C.

This certificate supersedes the Certificate of Conformance No. 89-071P and is issued to upgrade the status of the certificate from provisional to full.

Two 50,000-lb capacity load cells were tested at NIST using dead weights as the reference standard. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of -10 to 40 °C. Three tests were run on the each cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

Type Evaluation Criteria Used: NIST Handbook 44, 1990 Edition

Tested By: NIST Force Group, NIST Office of Weights and Measures